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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,294	05/31/2001	Med A. Nation	INTL-0586-US (P11727)	8631
7590 09/29/2005			EXAMINER	
Timothy N. Trop TROP, PRUNER & HU, P.C. 8554 KATY FWY, STE 100 HOUSTON, TX 77024-1805			KIM, KEVIN	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,294

Applicant(s)

NATION, MED A.

Examiner

Kevin Y. Kim

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-25 and 27-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-25 and 27-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed September 21, 2005, with respect to the rejection(s) of claim(s) under 35 USC 102 or 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sorrells et al (US 6,542,722) previously cited but not used.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,3-7,9,11-14,16-23,25,27-29,31-33,35-37,39,41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Sorrells et al (previously cited).

Claims 1,25,31,36 and 42.

Sorrells et al discloses a method, see Figs. 9, 19A-19E, comprising;
generating (step 904) a first signal (1904) having a fundamental frequency,
modulating or multiplying (step 906) an input signal (step 902) with the first signal,
tuning (step 910) the modulation to a harmonic of the fundamental frequency to produce
a modulated signal having a carrier frequency near the harmonic, wherein the modulated
signal having substantially more spectral energy near the harmonic than the fundamental

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frequency. See the filter (1414) removes unwanted frequencies outside a chosen harmonic. See col. 16, line 11 – col.18, line27.

Claims 3, 4, 27,28,32,33,35 and 41.

See the filter (1414) removes unwanted frequencies outside a chosen harmonic for “establishing a filtering passband.” See col. 18, lines 10-16.

Claims 5,29.

See col. 18, lines 13-19 that describes the use of the third harmonic for “an odd harmonic.”

Claim 6.

See Fig. 17 illustrating the case that the input signal is a complex signal.

Claims 9,37.

Sorrells et al discloses a system, see Figs. 14, 19A-19E, comprising;
an oscillator (1406) for generating a first signal (1904) having a fundamental frequency,
a modulator or multiplier (1404) for modulating an input signal with the first signal,
a filter (1414) coupled to the modulator to tune the modulation to a harmonic of the
fundamental frequency to produce a modulated signal having a carrier frequency near
the harmonic, wherein the modulated signal having substantially more spectral energy
near the harmonic than the fundamental frequency. See the filter (1414) removes
unwanted frequencies outside a chosen harmonic. See col. 16, line 11 – col.18, line27.

Claims 11,12,16.

See the filter (1414) removes unwanted frequencies outside a chosen harmonic for “establishing a filtering passband.” See col. 18, lines 10-16.

Claim 13.

See col. 18, lines 13-19 that describes the use of the third harmonic for “an odd harmonic.”

Claim 14.

See Fig. 17 illustrating the case that the input signal is a complex signal.

Claims 17,39.

Sorrells et al discloses a transmitter, see Figs. 14, 19A-19E, comprising;
a modulation system to

generate (step 904) a first signal (1904) having a fundamental frequency,
modulate or multipliy (step 906) an input signal (step 902) with the first signal,
tune (step 910) the modulation to a harmonic of the fundamental frequency to
produce a modulated signal having a carrier frequency near the harmonic, wherein the
modulated signal having substantially more spectral energy near the harmonic than the
fundamental frequency. See the filter (1414) removes unwanted frequencies outside a
chosen harmonic. See col. 16, line 11 – col.18, line 27.

Circuitry (1008) to communicate the modulated signal to a communication medium.

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Claims 18.

Sorrells et al discloses that the modulation system comprises a modulator (1404) and a filter (1414).

Claims 19,20,21.

See the filter (1414) removes unwanted frequencies outside a chosen harmonic for “establishing a filtering passband.” See col. 18, lines 10-16.

Claim 22.

See col. 18, lines 13-19 that describes the use of the third harmonic for “an odd harmonic.”

Claim 23.

See Fig. 17 illustrating the case that the input signal is a complex signal.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8,15,24,30,34,38,40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorrells et al, as applied to respective base claims above, in view of Abeno (previously cited).

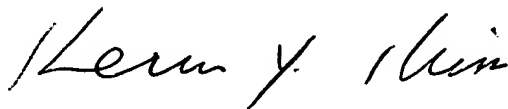
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Sorrells et al discloses all the subject matter claimed, as explained above, but fails to teach the modulation including "at least one Gilbert cell multiplier." Abeno teaches that a Gilbert cell mixer is mainly used in a conventional phase modulator. See col. 1, lines 26-28. Thus, it would have been obvious to one skilled in the art at the time the invention was made to construct the phase modulator of Sorrells et al with a Gilbert cell multiplier because it is mainly used in a phase modulator as taught by Abeno.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KEVIN KIM
PATENT EXAMINER**